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ECONOMIC FACTORS INFLUENCING EDUCATIONAL ATTAINMENTS AND
ASPIRATIONS OF FARM YOUTH.

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*RURAL EDUCATION, RURAL FAMILY, SECONDARY EDUCATION,
VOCATIONAL EDUCATION, ECONOMIC RESEARCH SERVICE,

IN 1962 A STUDY WAS CONDUCTED BY SURVEYING 756,000 FARM
FAMILIES IN 30 STATES, WITH CHILDREN 15 THROUGH 21 YEARS OLD.
THE OBJECTIVES WERE TO--(1) EXAMINE THE QUALITY AND QUANTITY
OF ECONOMIC RESOURCES AVAILABLE TO FARM YOUTH FOR SECURING
POST HIGH SCHOOL EDUCATION, (2) DETERMINE THE EDUCATIONAL
ATTAINMENT AND ASPIRATIONS OF THESE FARM YOUTH FOR POST HIGH
SCHOOL TRAINING, AND (3) RELATE THE EDUCATIONAL ASPIRATIONS
OF THESE YOUNG PEOPLE TO PLANS FOR POST HIGH SCHOOL TRAINING.
FOUR HIGHLIGHTS WERE IDENTIFIED--(1) SEVERAL FACTORS ACCOUNT
FOR THE RELATIVE EDUCATIONAL DISADVANTAGEMENT OF RURAL YOUTH,
COMPARED WITH URBAN YOUTH, (2) STUDIES INDICATE THAT FARM
YOUTH HAVE LOWER LEVELS OF ATTAINMENT AND ASPIRATION THAN
URBAN YOUTH, (3) DIFFERENCES IN LEVELS OF EDUCATIONAL
ATTAINMENT AND ASPIRATION AMONG FARM YOUTH MAY BE RELATIVE TO
THE QUALITY AND QUANTITY OF FINANCIAL RESOURCES AVAILABLE TO
PROVIDE ADDITIONAL EDUCATION, AND (4) FARM OPERATORS WERE
WILLING TO INCUR DEBT, IF NECESSARY, FOR EDUCATIONAL
PURPOSES. PRESENTED ARE EDUCATIONAL ATTAINMENTS OF THE SURVEY
POPULATION, EDUCATIONAL ASPIRATIONS, CHARACTERISTICS OF FARM
FAMILIES IN THE SURVEY POPULATION, SOURCES OF FINANCIAL
ASSISTANCE FOR EDUCATION, PLANNERS AND EXPECTED ATTENDERS,
AND IMPLICATIONS OF THE STUDY. (SF)

EDUCATIONAL ATTAINMENTS AND ASPIRATIONS OF FARM YOUTH

THE CENTER FOR CULTURAL STUDIES
Adams State College of Colorado
Alamosa

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UNITED STATES DEPARTMENT OF AGRICULTURE
Economic Research Service
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E R R A T A

HIGHLIGHTS

Page vii, 5th paragraph, 1st sentence, change to read as follows:

In 1962, approximately 58 percent of the farm operators who had children, 15 through 21 years old, had completed eight grades or less of schooling.

Economic Factors Influencing Educational Attainments and Aspirations of Farm Youth.
Agr. Econ. Rpt. No. 51, April 1964.

Pages 5, 6, and 7, Tables 3 and 4

Change stub column "Age and grade completed" 18 years old through 21 years old, as follows:

Less than 5 grades	<u>to</u>	Less than 9 grades
5 to 7 grades	<u>to</u>	9 to 11 grades
8 grades	<u>to</u>	12 grades and over

Pages 8 and 9, section "Farm Operators and Youth, 15 Through 21 Years Old, in Survey,"
Substitute the following paragraphs:

Page 8, change last paragraph to read as follows:

In 1962, a study of educational attainments of farm operators who had children 15 to 21 years of age revealed that approximately 58 percent had completed eight grades or less of formal schooling. About 10 percent of these operators had completed less than 5 grades of schooling. In most occupations, workers who have completed less than 5 years of formal education are classified as "functionally illiterate." Approximately 25 percent of farm operators in the study population had completed high school. But only 7 percent of these had formal schooling beyond this level.

Page 9, change first paragraph to read as follows:

Of the farm youth, approximately 70 percent were still in school and 30 percent were out of school. About 4 percent of the young people who were still in school were repeating their grades.

Page 10, substitute for last paragraph:

Approximately one-third of the 17 year old and two-thirds of the 18 year old young people had completed high school (18 years is the normal age for high school graduation). About 30 percent of the 19 year old youth, and 35 and 33 percent, respectively, of the 20 and 21 year old young people had completed 1 to 3 years of training beyond the high school level (table 8). In contrast, about 5 percent of the farm operators completed this level of training (table 6).

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HIGHLIGHTS

1. Several factors account for the relative educational disadvantage of rural youth, compared with urban youth. Rural educational facilities and services have not shared fully in national growth. Small school districts, low population density, and relatively low income have produced a quality of education which by many available standards is less adequate than that provided in urban systems.

2. Studies provide evidence that farm youths have lower levels of attainment and aspiration than urban youths. In 1959, a national study showed that 58 percent of the urban, 51 percent of the rural nonfarm, and 36 percent of the farm youth, who were high school graduates, planned to attend college in 1960. Actual enrollment of high school graduates in college in 1960 was lower than planned attendance indicated in 1959. The percentages enrolled were: urban, 48 percent; rural nonfarm, 34 percent; and rural farm, 33 percent.

In 1962, a study of farm youth, aged 15 through 21, indicated that 53 percent of 162,000 high school graduates planned to undertake post high school training. In the study area, 30 States within 7 census regions, plans for post high school training varied considerably by race and among regions. Combined percentages of planned attendance for the three types of schooling -- college, trade, and technical -- were: white males, 47 percent; non-white males, 56 percent; white females, 59 percent; and nonwhite females, 63 percent.

3. Differences in levels of educational attainment and aspiration among farm youth may be related to the quantity and quality of financial resources available to provide additional education. Also, the educational attainment and aspiration of parents and the occupational status of the head of the household are related to the educational attainment and aspirations of these young people. Approximately 75 percent of the farm operators in 1962 had gross sales of farm products amounting to less than \$10,000. A majority of the farm youths were members of these households. Thus, many farm operators are unable to finance post high school education for their children from their farm income.

In 1962, approximately 58 percent of the farm operators ^{marked children,} ~~and 55 percent of their children,~~ 15 through 21 years old, had completed eight grades of school. Of the 1.3 million youths in the survey, 900,000 were attending school and 400,000 had dropped out. Almost three-fourths of the farm youths who were out of school or repeating grades had completed eight grades or less of formal schooling. Also, about half of the youths who repeated grades did so in the eighth grade. Half of the youths who dropped out of school did so because they lacked the desire for additional education, or they lacked financial resources.

4. Farmers obtained loans from the following sources to finance their children's education: private banks (70 percent), colleges or schools (5 percent), National Defense Act (2 percent), and miscellaneous, including scholarships and gifts from relatives (23 percent). Generally, farm operators who failed to obtain loans from banks operated farms of less than 260 acres. However, an appreciable proportion of farm operators indicated a willingness to incur debt, if necessary, for educational purposes. Between 1957 and 1962, 9 percent of the farm operators in 30 States obtained loans for this purpose, while 4 percent applied for but failed to obtain assistance. Approximately 87 percent of the farm operators did not apply for educational loans during this period.

ECONOMIC FACTORS INFLUENCING EDUCATIONAL ATTAINMENTS AND ASPIRATIONS OF FARM YOUTH

by

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INTRODUCTION

A prime goal of our American democracy is educational opportunity for all youth. Education is a basic requisite for responsible citizenship, technological and social progress, and economic growth. ^{1/} A prerequisite for economic growth is the continuing development of human capabilities and potentials.

In attempting to solve problems relating to low income in our democratic system, we rely primarily upon public programs to improve: (a) the economic opportunities of the individual or family, and (b) the capability of the individual to get the full benefit from the economic opportunities society affords.

Little knowledge exists as to the impact of education on economic growth. There is a growing interest and concern for developing techniques to measure the effects of education on economic growth (2, 7, 11, 12, 18, 20).

Rural farm youths need the same opportunity to acquire an education that their urban and rural nonfarm counterparts have so they can become fully competitive in the national labor market. Considerable evidence indicates that males reared on farms or in rural areas have less success in the urban labor market than urban-reared males. Farm-reared males change jobs more frequently, earn lower incomes, and are disproportionately represented in unskilled and semiskilled jobs (3, 5, 9, 15). ^{2/} These differences suggest that many farm-reared youths need special aid in obtaining educational training beyond high school and in choosing an occupation.

An appreciable proportion of farm youth are qualified for, but not financially able to secure, post high school education. Such an education is necessary if they are to find jobs that will enable them to earn an "adequate" living. There is an

^{1/} Economic growth, as used in this report, includes the processes of economic development. For a discussion of economic growth, see: Agriculture and Economic Growth (8, pp. 2-5); and Economic Growth in the United States (6). (Underscored numbers in parentheses refer to items listed in the Literature Cited, p. 38.)

^{2/} Burchinal, L. G., and Jacobson, P. Occupational Achievement Differences Among Farm-To-Urban Migrant Males and Other Urban Males. Paper presented at meeting of Midwest Sociol. Soc., St. Louis, Apr. 23, 1960. [Unpublished.] Bauder, W. W., and Burchinal, L. G. Occupational Achievement of Rural-To-Urban Migrant Males in Comparison With Two Urban Control Groups. Paper presented at meeting of Amer. Sociol. Assoc., St. Louis, Sept. 2, 1961. [Unpublished.]

urgent need for developing policies and programs to provide educational assistance for qualified youths.

Heady (13) suggests that much of rural poverty stems from the inadequate resources available to a large segment of the rural population. The same paucity of land, capital, and education, which causes failure in agriculture, also inhibits the shift of these disadvantaged people to alternative occupations.

PURPOSE AND SCOPE OF STUDY

The objectives of this study are to: (1) Examine the quality and quantity of economic resources available to farm youth for securing post high school education; (2) determine the educational attainment and aspiration of farm youth, aged 15 through 21, for post high school training; and (3) relate the educational aspirations of these young people to plans for post high school training.

In 1959 there were 3.7 million farm families in the United States. Of this total, 3.2 million were in 30 States comprising the 7 major census divisions included in the June 1962 Enumerative Survey. 3/ The information on education obtained from this survey represents 756,000 of an estimated 889,000 families with children 15 through 21 years old, in these 30 States. The survey farm families accounted for 1.3 million persons 15 through 21 years old, including those not living in the household. In 1962, about 400,000 rural farm youth in this age group were out of school, and 900,000 were in school.

EDUCATIONAL ATTAINMENTS

An analysis is made from information on educational aspirations, opportunities, and plans of senior high school youth. Data obtained in the Enumerative Survey are combined with related data obtained by other public research and data development organizations.

Years of School Completed

Gains in educational attainments were made by all subgroups of the population during the period 1950-60. Rural farm persons 25 years old or over who had completed 12 grades or more of school increased from 19.6 percent in 1950 to 29.5

3/ Census Region 3: (East North Central): Ohio, Indiana, Illinois, Michigan, and Wisconsin.

Census Region 4: (West North Central): Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

Census Region 5: (South Atlantic): Virginia, North Carolina, South Carolina, and Georgia.

Census Region 6: (East South Central): Kentucky, Tennessee, Alabama, and Mississippi.

Census Region 7: (West South Central): Arkansas, Louisiana, Oklahoma, and Texas.

Census Region 8: (Mountain): Montana, Wyoming, Colorado, and New Mexico.

Census Region 9: (Pacific): Washington and Oregon.

percent in 1960. For rural nonfarm persons, this level of educational attainment increased from 27.8 to 34.4 percent, and for urban persons from 37.8 to 44.3 percent during this period (22).

In general, improvement in educational attainment is indicated by the increase in the median years of school completed by persons 25 years old and over. Median years of school completed by this portion of the population increased by 2 years, from 8.6 in 1940 to 10.6 in 1960 (table 1).

Table 1. - Median years of school completed by persons 25 years old and over, by color and sex, United States, 1940 to 1960

Color and sex	Median school years completed		
	1940	1950	1960
United States-----	8.6	9.3	10.6
Male-----	8.6	9.0	10.3
Female-----	8.7	9.6	10.9
White-----	8.7	9.7	10.9
Male-----	8.7	9.3	10.7
Female-----	8.8	10.1	11.2
Nonwhite-----	5.8	6.8	8.2
Male-----	5.4	6.4	7.9
Female-----	6.2	7.2	8.5

Source: Statistical Abstract of the U. S. (25, p. 117) and Census of Population (22, 1960, vol. 1).

During the two decades, median years of school completed increased faster for females than for males. In 1940, it was 8.6 for males and 8.7 for females -- a difference of one-tenth of a year. By 1960, this difference had increased slightly more than one-half of a year, with the median for men at 10.3 and that for women at 10.9 years (table 1). The greatest gain recorded for any group was the increase in median years of school completed by nonwhite males, from 5.4 in 1940 to 7.9 years in 1960, an increase of 2.5 years.

Yet, there has been a persistent difference between white and nonwhite persons 25 years old and over in educational gains during the 20-year period. Part of this difference can be accounted for by the relatively low level of educational attainment of nonwhites in the rural farm population.

Rural Gains in Schooling

Over time, the level of schooling completed among rural people has increased. In 1940, for example, only 31 percent of rural people 25 years old or over had gone beyond the eighth grade; whereas, in 1950, 40 percent had achieved this level of education. In 1940, 10 percent of rural adults had 4 years of high school education; whereas, in 1950, 15 percent had that amount of formal schooling.

Almost all comparative measures of educational attainment dramatize the relatively low level of attainment in rural areas, compared with levels of formal schooling attained in urban areas and in the United States (table 2).

Table 2. - Years of school completed by persons 25 years old and over, by residence and color, United States, 1950 and 1960

Residence and color	Median school years completed	
	1950	1960
Urban-----	10.2	11.1
White -----	10.5	11.5
Nonwhite -----	7.8	8.7
Rural nonfarm -----	8.8	9.5
White -----	8.9	9.9
Nonwhite -----	5.5	6.4
Rural farm -----	8.6	8.8
White -----	8.8	8.9
Nonwhite -----	5.1	5.7
United States -----	9.3	10.6
White -----	9.7	10.9
Nonwhite -----	6.9	8.2

Source: U. S. Census of Population (22, 1950 and 1960).

Between 1950 and 1960, the level of schooling among rural farm people did not increase as rapidly as that of the urban population. In 1950, the median years of school completed was 8.6 for rural farm and 10.2 years for urban -- a difference of 1.6 years. By 1960, this difference had increased to 2.2 years: 8.8 years for rural farm and 11.1 years for urban (table 2).

The smallest gain recorded was the increase in median years of school completed by the rural farm white population, that is, from 8.8 years in 1950 to 8.9

years in 1960. The median school years completed by the rural farm nonwhite population increased 0.6 year from 1950 to 1960.

In 1960, both rural farm and nonfarm persons aged 15 through 21 showed a greater proportion below the eighth grade than did urban youths. For youth who were 16 years old and resided in urban areas, 8 percent of the males and 6 percent of the females had completed less than eight grades of schooling; whereas, for those residing on farms 15 percent of the males and 9 percent of the females had completed only this level of schooling. For rural nonfarm youth, 16 percent of the male and 10 percent of the female youth had completed less than eight grades of school (table 3).

Table 3. - Percentage of persons aged 15 through 21 who had completed specified grades of school in 1960, by age, residence, and sex, United States

Age and grade completed	Urban		Rural nonfarm		Rural farm	
	Male	Female	Male	Female	Male	Female
	Percent	Percent	Percent	Percent	Percent	Percent
<u>15 years old</u>						
Less than 5 grades-----	1.9	1.7	3.9	2.7	4.1	2.8
5 to 7 grades-----	14.7	9.4	23.7	15.0	20.6	13.3
8 grades-----	32.0	28.5	32.4	31.4	32.0	31.1
<u>16 years old</u>						
Less than 5 grades-----	1.8	1.7	3.4	2.4	3.7	2.3
5 to 7 grades-----	6.4	4.0	12.4	7.3	11.6	7.0
8 grades-----	11.4	7.6	14.6	10.1	12.7	8.6
<u>17 years old</u>						
Less than 5 grades-----	1.6	1.4	3.1	2.2	3.0	2.0
5 to 7 grades-----	4.0	2.9	8.7	5.7	9.0	5.3
8 grades-----	5.9	4.3	9.1	6.3	8.4	5.7
<u>18 years old</u>						
Less than 5 grades-----	5.0	3.9	8.0	6.5	8.3	6.4
5 to 7 grades-----	45.7	39.1	51.1	50.7	53.4	54.6
8 grades-----	43.9	53.2	30.0	34.8	25.5	30.4
<u>19 years old</u>						
Less than 5 grades-----	5.0	4.0	7.9	6.9	9.2	7.8
5 to 7 grades-----	26.4	24.0	31.5	31.2	29.3	28.6
8 grades-----	63.0	67.6	49.6	53.1	46.5	52.5
<u>20 years old</u>						
Less than 5 grades-----	5.4	4.4	8.3	7.3	10.0	7.9
5 to 7 grades-----	23.3	22.6	26.2	28.4	22.3	24.3
8 grades-----	65.7	69.0	54.4	56.0	51.5	56.7

Table 3. - Percentage of persons aged 15 through 21 who had completed specified grades of school in 1960, by age, residence, and sex, United States -- continued

Age and grade completed	Urban		Rural nonfarm		Rural farm	
	Male	Female	Male	Female	Male	Female
	Percent	Percent	Percent	Percent	Percent	Percent
<u>21 years old</u>						
Less than 5 grades-----	5.5	4.5	8.4	7.5	10.8	8.2
5 to 7 grades-----	22.7	22.0	24.2	27.2	20.0	22.5
8 grades-----	66.1	69.2	55.8	57.1	52.0	58.0

Comparisons of 18- and 19-year-old persons residing in urban areas with similar age groups in rural farm and nonfarm areas indicate that a higher proportion of urban youths had completed 12 or more grades in 1960. There was not much difference between the rural farm and nonfarm youths. Similar comparisons between the 20- and 21-year-old persons indicate that urban youth maintained a higher level of education.

Female youth, generally, had completed more years of schooling than the male youth in the same age group. Larger differences in grades completed are indicated between the proportions of male and female rural farm youth than rural nonfarm or urban young people (table 3).

According to the 1960 Census data, a higher proportion of rural youth 15 through 21 had completed less than eight grades of school than for either urban or rural nonfarm youth (tables 3 and 4).

Table 4. - Percentage of nonwhite persons aged 15 through 21 who had completed specified grades of school in 1960, by age, residence, and sex, United States

Age and grade completed	Urban		Rural nonfarm		Rural farm	
	Male	Female	Male	Female	Male	Female
	Percent	Percent	Percent	Percent	Percent	Percent
<u>15 years old</u>						
Less than 5 grades-----	3.7	2.7	10.6	6.1	14.6	8.0
5 to 7 grades-----	25.9	18.7	41.1	31.2	45.3	36.2
8 grades-----	30.7	29.8	24.5	28.4	21.5	26.5
<u>16 years old</u>						
Less than 5 grades-----	2.8	2.2	8.7	4.9	11.7	6.1
5 to 7 grades-----	14.0	8.7	27.4	18.5	34.4	23.1
8 grades-----	17.6	13.5	19.3	17.3	18.2	16.5

Table 4. - Percentage of nonwhite persons aged 15 through 21 who had completed specified grades of school in 1960, by age, residence, and sex, United States -- continued

Age and grade completed	Urban		Rural nonfarm		Rural farm	
	Male	Female	Male	Female	Male	Female
	Percent	Percent	Percent	Percent	Percent	Percent
<u>17 years old</u>						
Less than 5 grades-----	2.9	2.1	7.9	4.8	10.3	5.2
5 to 7 grades -----	9.4	6.4	20.1	14.0	27.7	17.4
8 grades -----	10.7	8.3	14.6	11.8	13.9	12.9
<u>18 years old</u>						
Less than 5 grades-----	8.8	6.8	11.2	9.9	12.5	10.3
5 to 7 grades -----	55.9	51.4	50.2	55.1	45.1	55.0
8 grades -----	24.0	34.3	13.8	16.4	6.8	11.9
<u>19 years old</u>						
Less than 5 grades-----	8.1	6.4	10.4	9.6	11.7	10.7
5 to 7 grades -----	41.4	38.0	39.6	39.9	36.5	43.3
8 grades -----	38.7	47.3	24.1	29.1	13.0	19.9
<u>20 years old</u>						
Less than 5 grades-----	8.1	6.9	9.9	10.3	12.0	11.2
5 to 7 grades -----	36.2	34.7	32.8	34.9	30.8	35.8
8 grades -----	43.7	50.3	30.7	32.8	15.8	25.7
<u>21 years old</u>						
Less than 5 grades-----	8.3	7.1	9.4	11.1	13.1	12.0
5 to 7 grades -----	34.8	33.7	29.3	33.2	24.9	30.6
8 grades -----	44.4	50.6	31.1	32.6	17.0	26.4

School Enrollment

Indicated differences in years of school completed by persons 25 years old and over are related to the proportions of those persons enrolled in school in previous years. For example, persons who were 25 years old in 1960 were 15 years old in 1950. Thus, indications of present and future differences in years of schooling completed by residence and color can be shown by an analysis of school enrollment of specific age groups (table 5).

About 58 percent of the 17.7 million persons aged 15 through 21 in the United States in 1960 were enrolled in school (22, 1960, ser. D). The rate of enrollment varied among places of residence and between sex and color. Approximately 61 percent of rural farm youths were enrolled in school contrasted with 58 percent of urban and 53 percent of rural nonfarm.

Table 5. - Percentage distribution of white and nonwhite persons aged 15 through 21 enrolled and not enrolled in school in 1960, by residence and sex, United States

Enrollment status	Urban		Rural nonfarm		Rural farm		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
<u>White</u>								
Enrolled-----	64.4	54.8	53.7	52.4	58.1	60.9	61.1	54.7
Not enrolled--	35.6	45.2	46.3	47.6	41.9	39.1	38.9	45.3
Total-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>Nonwhite</u>								
Enrolled-----	55.1	48.5	50.0	53.0	69.0	70.9	56.0	52.4
Not enrolled--	44.9	51.5	50.0	47.0	31.0	29.1	44.0	47.6
Total-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>Total</u>								
Enrolled-----	63.3	54.1	53.5	52.5	60.0	62.8	60.5	54.4
Not enrolled--	36.7	45.9	46.5	47.5	40.0	37.2	39.5	45.6
Total-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

A comparison of enrollment of white and nonwhite youth who were 15 through 21 years old shows that 58 percent of the white and 54 percent of the nonwhite youth were enrolled in school in 1960 (22, 1960, ser. D). In both groups, more males were enrolled than females (table 5).

For the female group as a whole, more rural farm youth were enrolled than either rural nonfarm or urban. A larger percentage of nonwhite rural farm female youth were enrolled than white, 71 percent compared with 61 percent, respectively (table 5).

The rate of school enrollment for white male youths ranged from 54 percent for rural nonfarm to 64 percent for urban; whereas for nonwhite males, it ranged from 50 percent for rural nonfarm to 69 percent for rural farm (table 5).

Farm Operators and Youth, 15 Through 21 Years Old, in Survey

In 1962, a study of educational attainments of farm operators and their children revealed that approximately 58 percent of the farm operators and 55 percent of their children 15 through 21 years old had completed the eighth grade. About 17 percent of the farm operators and 19 percent of their children had completed high school. About 5 percent of the farm operators and 6 percent of the farm youth had 1 to 3 years of college. Also, about 3 percent each of the farm operators and the farm youth had completed 4 or more years of college by June 1962 (table 6).

Table 6. - Percentage distribution of farm operators and their children who were in school, out of school, or repeating grade, according to highest grade of school completed by operator, 30 survey States, 1962

Highest grade of school completed by operator	Farm operator	Children of operator who were:		
		In school	Out of school	Repeating grade
	Percent	Percent	Percent	Percent
No school-----	1.5	1.4	2.3	2.9
1 to 2 grades----	1.6	1.3	2.8	1.0
3 to 4 grades----	6.5	5.7	10.4	13.5
5 to 7 grades----	18.2	17.1	22.2	23.9
8 grades-----	30.4	29.0	34.8	31.7
9 to 11 grades---	16.9	17.5	14.6	16.1
12 grades-----	17.5	19.1	9.7	8.7
13 to 15 grades--	4.5	5.8	2.1	1.5
16 grades and over-----	2.9	3.4	1.1	.7
Total-----	100.0	100.0	100.0	100.0
Number -----	833, 556	896, 308	390, 953	32, 374

Of the farm youth who were out of school or repeating grades, about 73 percent of each group had completed eight grades or less of formal schooling.

Regional Differences in Educational Attainments

Three regions -- South Atlantic, East South Central, West South Central -- provide a broad base for comparative analysis. A large majority of the nonwhite farm operators and their children in the age group 15 through 21 live in this area. Thus, comparisons can be made among and within regions for both segments of the population.

Variations in levels of educational attainments were indicated in this study among regions and between white and nonwhite farm families. For example, the percentage of youths aged 15 through 21 who had completed eight grades of school ranged from 12 percent in the South Atlantic Region to 23 percent of all youths in the East South Central. Variations between color for this same attainment among the regions were as follows: South Atlantic white, 12 percent, nonwhite, 13 percent; East South Central white, 26 percent, nonwhite, 13 percent; West South Central white, 21 percent, nonwhite, 9 percent (table 7).

About 64 percent of the white farm youth in the West South Central Region and 54 percent in the East South Central had completed between 8 and 12 grades of formal schooling. Twenty-two percent of the nonwhite farm youth in each region had completed this level of schooling (table 7). One or more years of college training was

Table 7. - Percentage distribution of farm youth aged 15 through 21 who had completed specified grade of school, by color and region, 1962

Grade completed	South Atlantic			East South Central			West South Central		
	White	Non-white	Total	White	Non-white	Total	White	Non-white	Total
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
No school -----	2	5	3	1	6	2	2	11	3
1 to 2 grades -----	2	10	4	3	7	4	1	7	1
3 to 4 grades -----	10	18	12	12	28	16	5	19	7
5 to 7 grades -----	38	41	39	25	33	26	20	41	23
8 grades -----	12	13	12	26	13	23	21	9	20
9 to 11 grades -----	24	11	21	14	8	12	23	12	21
12 grades -----	6	1	5	14	1	11	20	1	17
13 to 15 grades -----	3	1	2	3	0	3	5	0	5
16 grades and over--	3	0	2	2	4	3	3	0	3
Total-----	100	100	100	100	100	100	100	100	100

reported by 8 and 5 percent of the white farm youth in the West South Central and the East South Central Regions, respectively. Nonwhite youth reported 0 and 4 percent, respectively, in these regions.

In the South Atlantic Region, 48 percent of the white farm youth had completed eight or more grades. This was lower than that which existed in the East South Central or the West South Central. Twenty-six percent each of the nonwhite farm youth in the South Atlantic and the East South Central Regions had completed eight or more grades, which was higher than that indicated in the West South Central (22 percent).

Age and Educational Attainment

Educational attainment is related, somewhat, to age. Farm youth 15 to 17 years old comprised the larger portion of youth who had completed eight grades or less. Approximately 17 percent of the farm youth who were 15 years old had completed eight grades or less, whereas 10 percent of the 16-year-old group had completed this level of formal education (table 8). The smallest proportion of farm youth with this level of formal education was the 17-year-old group. Each age bracket thereafter had a larger proportion with this level of training.

Apparently, the eighth grade is a crucial point in the educational career of farm youth. Approximately 73 percent each of the farm youth who repeated grades or who were out of school had completed eight grades or less of formal school in June 1962. About half of the youth who repeated grades did so in the eighth. In contrast, about 10 percent of the farm youth "dropped out" of school after completing the 11th grade.

Table 8. - Percentage distribution of farm youth, aged 15 through 21, who completed specified grades of school in 1962, 30 survey States

Grade completed	Age						
	15	16	17	18	19	20	21
	years	years	years	years	years	years	years
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
0 to 4 grades -----	0.8	0.4	0.8	0.1	0.6	0.5	0.3
5 to 7 grades -----	5.1	3.2	2.4	3.9	2.6	3.1	3.2
8 grades -----	11.5	6.9	3.9	5.4	4.8	4.8	5.9
9 to 11 grades -----	82.4	88.3	62.9	20.2	17.2	13.2	9.1
12 grades -----	0.1	1.0	28.4	54.1	44.3	42.8	42.8
13 to 15 grades -----	0.1	0.2	1.6	15.3	30.4	34.8	32.6
16 grades and over----	0	0	0	0.1	0.1	0.8	6.1
Total-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0

School "Dropouts"

The rapid rise in unemployment of young people has been made more serious since 1957 by the relatively high rate of unemployment for the high school dropout. During the period January through October 1961, 350,000 youths over age 16 dropped out of school before graduation. As of October 1961, 27 percent of these dropouts were unemployed (30, p. 41). In contrast, 18 percent of the 1961 high school graduates were unemployed in October 1961. Among the white males, the 1961 school dropouts had an unemployment rate of 30 percent, contrasted with 16 percent for the 1962 graduates.

In a special study based on seven surveys conducted at least 1 year after students dropped out of school, it was found that 69 percent of the males and 76 percent of the female dropouts were 17 years old or less when they left school. About 71 percent of the males and 45 percent of the females secured jobs in semiskilled and unskilled work. Comparable figures for these jobs for high school graduates were 26 percent for males and 11 percent for females (25, p. 119). School dropouts are not always found in the lowest level of mental ability groups (table 9).

In the study reported, youth who dropped out of school did so in greater proportions at or below the eighth grade. Half of these youth were out of school because they lost the desire for additional education, or they needed extra income and obtained off-farm employment (table 10). Only 2 percent of the farm youth who dropped out did so because of their inability to make acceptable grades. The extent to which the levels of educational aspirations of farm youth differs from urban youth needs to be studied in greater detail for the purpose of policy and program development.

Table 9. - Percentage distribution of school leavers -- dropouts and high school graduates -- according to level of mental ability, by sex, 7 geographic areas, 1952-57 ^{1/}

Intelligence quotient ^{2/}	Dropouts		High school graduates	
	Male	Female	Male	Female
	Percent	Percent	Percent	Percent
Under 85 -----	32	28	12	8
85 to 89 -----	15	15	11	11
90 to 109 -----	47	50	62	64
110 to 114 -----	4	5	8	9
115 and over-----	2	2	7	8
Total-----	100	100	100	100

^{1/} School leavers are high school graduates who did not go to college or other formal training immediately after graduation, and students who dropped out of junior or senior high school before graduation from high school. The percent distribution is based on 7 surveys (1 in the summer of 1956; 6 in the summer of 1957) conducted at least 1 year after graduation or after dropping out.

^{2/} Based on Otis Mental Ability Group Test in 4 areas and on Terman-McNamar in 1 other; data for other areas not available. A quotient of 85 is the point below which successful completion of most high school subjects is regarded by most educational authorities as generally difficult, since useful reading ability is not usually acquired below this point. Those with IQ's between 85 and 89 are usually slow learners; 90 to 109 represents the normal range; and 110 or above is regarded by educators as the level of ability needed for college work.

Note: The 7 geographic areas surveyed were: Vanderburgh County, Ind.; Phoenix, Ariz.; Saginaw, Mich.; Port Huron, Mich.; Utica, N. Y.; Harrison County, W. Va.; and Providence, R. I. The 7 geographic areas covered by the surveys are not necessarily representative of the United States.

Source: Statistical Abstract of the United States (25, p. 119).

EDUCATIONAL ASPIRATIONS OF FARM YOUTH

Available research data relating to the educational aspirations of rural and urban youth give some insights for the lower occupational achievement of farm or rural-migrant males contrasted with urban-reared males (5). Findings of this study indicate that farm and rural nonfarm youth have lower levels of educational aspirations than do urban. For example, in 1959, a national study (23) revealed that 55 percent of urban male high school seniors planned to attend college in 1960. In contrast, only 44 percent of the rural nonfarm and 34 percent of the farm youth

Table 10. - Reasons farm youth gave for dropping out of school, 30 States, 1962

Reason	Dropouts	Percentage of total
	Number	Percent
Needed extra income; took off-farm job ---:	37,109	12
Needed to work on farm -----:	23,728	8
Joined armed forces -----:	26,394	9
Poor health -----:	13,334	4
Married -----:	54,195	18
Lost desire for additional education -----:	117,883	38
Inability to make acceptable grades -----:	7,849	2
Other-----:	27,029	9
Total -----:	307,521	100

seniors planned to do so. A similar breakdown for female youth showed 45 percent of the urban, 47 percent of the rural nonfarm, and 29 percent of the farm.

Available data from the same study (23) provide some insights on the plans for college attendance and actual attendance. Less than half of the 1,803,000 high school seniors who graduated from high school in 1960 actually attended college in 1960.

About 68 percent of the 1960 high school graduates who planned in 1959 to attend college did so in 1960 (24, pp. 12-14). Approximately 8 percent of those graduates who did not plan to attend college and 20 percent of those who were undecided on their plans did enroll in college in 1960.

The proportion of 1960 high school graduates enrolled in college in 1960 was lower than the proportion indicating plans to attend in 1959. Groups showing the largest differentials between plans to attend college and actual attendance were nonwhites and rural nonfarm high school graduates. The differences amounted to 17 percent in each group (table 11). Only 36 percent of the rural farm youth planned to attend college, and 33 percent of them did so.

In 1960, a study conducted in Wisconsin compared educational aspirations of youth from farm, rural nonfarm, village, and urban homes. 4/ Educational aspirations of these Wisconsin youth were compared for separate samples based on sex and intelligence levels. For the total group, the farm youth had the lowest levels of educational aspirations, rural nonfarm and village youth were intermediate, and urban youth had the highest.

4/ Sewell, W. H. Rural-Urban Differences in Educational Aspirations. Paper presented at the meeting of the Amer. Sociol. Assoc., New York, 1960.
[Unpublished.]

Table 11. - College plans of high school graduates in 1959 and their college attendance in 1960, by color, sex, and residence

Color, sex, and residence	Planned to attend	Did attend
	Percent	Percent
Male -----	56.3	46.0
Female -----	49.2	37.5
White -----	52.4	41.8
Nonwhite -----	56.3	39.4
Urban -----	57.6	47.7
Rural-nonfarm -----	51.2	34.0
Rural-farm -----	36.0	32.7
All graduates -----	52.7	41.6

Source: Factors Related to College Attendance of Farm and Nonfarm High School Graduates (24, table 5, p. 14).

In the study reported here farm youth aged 15 through 21 indicated a high latent demand for post high school training. Approximately 90 percent of the male and 93 percent of the female farm youth who were seniors in high school indicated this desire (table 12).

These figures illustrate the desires of high school farm youth to continue their education beyond the high school level. However, only 56 percent of the males and 59 percent of the females indicated definite plans for post high school training. They comprise the group which is described as "planners and expected attenders" later in the report.

Of the 162,000 high school seniors in the 30 survey States, 148,000, or 91 percent, reported that they were interested in continuing their education beyond high school. Definite plans were indicated by 86,000, or 53 percent, of the 1962 rural farm high school graduates. Thirty-eight percent of them were undecided or did not have definite plans, and 9 percent had no plans whatsoever to continue their formal education.

Considerable variation existed among the seven regions in levels of educational aspirations of rural farm youth. For example, only 33 percent of the males and 67 percent of the females in the Mountain States planned to continue their formal education beyond the high school level. In contrast, 96 percent of the males and 97 percent of the females in the West North Central States indicated such a desire (table 12).

Most of the nonwhite senior high school farm youth included in the survey were in the South Atlantic, East South Central, and West South Central Regions. The

Table 12. - Number of senior high school students in farm households and percentage interested in continuing their education, by sex and color, selected regions, 30 States, 1962

Item and region	White		Nonwhite		Total	
	Male	Female	Male	Female	Male	Female
	Number	Number	Number	Number	Number	Number
High school seniors in farm households:						
East North Central-----	24,709	17,078	1/	1/	24,709	17,073
West North Central-----	26,104	20,426	1/	1/	26,104	20,426
South Atlantic-----	7,889	8,845	1,997	4,420	9,886	13,265
East South Central-----	9,058	8,736	1,897	2,402	10,955	11,138
West South Central-----	9,898	7,428	1,402	910	11,300	8,338
Mountain-----	3,736	3,685	1/	1/	3,736	3,685
Pacific-----	990	621	39	39	1,029	660
Total-----	82,384	66,814	5,335	7,771	87,719	74,585
	Percent	Percent	Percent	Percent	Percent	Percent
Percentage interested in continuing school:						
East North Central-----	86	94	1/	1/	86	94
West North Central-----	96	97	1/	1/	96	97
South Atlantic-----	96	92	100	95	96	93
East South Central-----	98	95	90	85	97	92
West South Central-----	92	91	89	100	92	92
Mountain-----	33	67	1/	1/	33	67
Pacific-----	59	78	100	100	60	79
Average-----	90	93	94	93	90	93

1/ Data not available.

level of educational aspirations was highest for nonwhite seniors in the South Atlantic; whereas, it was lowest in the East South Central Region. The proportions did not differ greatly among the three regions for white and nonwhite high school seniors who indicated a desire for education beyond high school (table 12). Variations were greater among States within a particular region than among regions (table 13). For example, 60 percent of the nonwhite male and 67 percent of the nonwhite female youth in Tennessee planned to continue their education beyond high school. In contrast, 100 percent of the white male and 96 percent of the white female youth in Tennessee were interested in post high school training.

Table 13. - Rural farm youth: Percentage of high school seniors interested in continuing their education beyond high school, by color and sex, selected States, 1962

State and region	White		Nonwhite	
	Male	Female	Male	Female
	Percent	Percent	Percent	Percent
Virginia -----	100	100	100	100
North Carolina -----	95	90	100	89
South Carolina -----	100	94	100	100
Georgia -----	91	93	100	100
South Atlantic -----	96	92	100	95
Kentucky -----	100	88	1/	1/
Tennessee -----	100	96	60	67
Alabama -----	88	100	100	100
Mississippi -----	100	100	100	88
East South Central -----	98	95	90	85

1/ Data not available.

The educational aspirations of farm youth may be related to the amounts of family farm income available to pay the cost of post high school education. No farm incomes were not obtained in the 1962 Survey. Rather, gross value of farm products sold was reported. Recent research indicates that, on the average, gross farm sales amounting to \$10,000 are required to realize a net annual farm income of \$2,500 to \$3,500. ^{5/} Net farm income less than \$2,500 is probably too small to provide adequate financial assistance for a youth to attend college.

Total Family Income Related to Educational Aspirations

Total farm operator family income consists of farm and nonfarm income from all sources. Between 1949 and 1959, income received by farm operator families from nonfarm sources increased; whereas real net cash farm income per farm declined for major size groups of farms (16, pp. 10-11). Perhaps the increase in nonfarm income offsets the decrease in farm income for farms with gross sales amounting to less than \$5,000.

Income from off-farm sources was an important component of the total income of farm families during the period 1949-59 (16). But the increase of off-farm income

^{5/} For further discussion on resource requirements for specified operator incomes, see: Resource Developments of Farms for Specific Operator Incomes (1) and Farm Size, Capital, and Tenure Requirements (4).

was important on farms with less than \$5,000 of farm products sold, and relatively more important on farms with less than \$2,500 value of farm products sold.

Although amounts of gross sales of farm products sold are crude indicators of net farm income, other income data indicated that farm family total income is concentrated below \$5,000. Actually, in 1959 the median incomes ranged from \$1,398 to \$4,515 for all commercial farms. Incomes for white farm families ranged from \$1,564 to \$4,525, and for nonwhite farm families from \$1,028 to \$1,782.

When farm operator family income is contrasted with nonfarm family income, farm family income is an increasing proportion of the bottom 20 percent of the non-farm family income distributions. For example, in 1947, farm families accounted for 43.5 percent of the lowest quintile. In 1960, this proportion had increased to 59.1 percent. From the top portion of the distribution, the proportion of farm operator families declined. In the highest 20 percent, the percentage of farm operator families decreased from 12.4 percent in 1947 to 6.3 percent in 1960. Similar declines occurred in the second quintile (60 to 80 percent) -- from 12.7 percent in 1947 to 6.9 percent in 1960.

While these data are useful guides for estimating the probable levels of income available for providing financial assistance for farm youth to undertake post high school training, the exact amounts available for education cannot be determined. From such estimates, however, it appears that between two-thirds and three-fourths of the farm youth are members of farm households with relatively low total family income.

Regional comparisons of the educational attainments of farm youth aged 15 through 21 by amounts of farm products sold by the head of the household may provide some evidence as to why there were apparent differences in levels of educational aspirations of farm youth in a particular region. Similar comparisons can be made among and within regions for white and nonwhite farm youth (table 14).

In the South Atlantic Region, 2 percent of the high school and 27 percent of the college nonwhite youth were found on farms with gross sales of \$10,000 or more. A similar breakdown for white farm youth in this region showed 31 percent completed 9 to 11 grades; 7 percent, 12 grades; 38 percent, 1 to 3 years of college; and 47 percent, 4 or more years of college (table 14).

In the East South Central Region, nonwhite high school and college students were not found on farms with gross sales of \$10,000 or more. For white students in this region, there were 13 percent who had completed 9 to 11 grades; 9 percent, 12 grades; 20 percent, 1 to 3 years of college; and 58 percent, 4 or more years of college.

Only 7 percent of the nonwhite high school students in the West South Central Region were reported on farms with gross sales of \$10,000 or more. No college students were reported in this category. A similar breakdown for white youth on farms with gross sales of \$10,000 and over showed that 35 percent completed 9 to 11 grades; 37 percent, 12 grades; 42 percent, 1 to 3 years of college; and 32 percent, 4 or more years of college.

Table 14. - Percentage distribution of farm youth aged 15 through 21 who were members of farm households with annual sales of specified amounts, by color and grade of school completed, selected regions, 1962

Color and grade completed	Value of sales						Total
	0	\$250	\$1,500	\$2,500	\$5,000	\$10,000	
	to \$249	to \$1,499	to \$2,499	to \$4,999	to \$9,999	and over	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
SOUTH ATLANTIC REGION							
Nonwhite							
No school -----	4	16	13	20	47	0	100
1 to 2 grades -----	27	20	25	18	10	0	100
3 to 4 grades -----	7	32	23	28	10	0	100
5 to 7 grades -----	6	20	21	32	13	8	100
8 grades -----	19	62	16	0	3	0	100
9 to 11 grades -----	15	13	28	33	9	2	100
12 grades -----	33	0	33	34	0	0	100
13 to 15 grades -----	0	0	73	0	0	27	100
16 grades and over----	0	0	0	0	0	0	0
White							
No school -----	0	0	65	0	35	0	100
1 to 2 grades -----	26	4	0	17	53	0	100
3 to 4 grades -----	11	20	31	14	12	12	100
5 to 7 grades -----	13	23	20	14	21	9	100
8 grades -----	13	12	12	18	18	27	100
9 to 11 grades -----	7	15	15	14	17	31	100
12 grades -----	23	30	15	5	20	7	100
13 to 15 grades -----	19	0	9	19	15	38	100
16 grades and over----	7	26	0	13	7	47	100
EAST SOUTH CENTRAL REGION							
Nonwhite							
No school -----	6	32	57	5	0	0	100
1 to 2 grades -----	10	24	0	66	0	0	100
3 to 4 grades -----	14	35	20	26	5	0	100
5 to 7 grades -----	13	48	25	11	3	0	100
8 grades -----	8	35	21	28	6	2	100
9 to 11 grades -----	20	51	21	4	4	0	100
12 grades -----	27	0	0	73	0	0	100
13 to 15 grades -----	0	0	0	0	0	0	0
16 grades and over----	0	44	24	0	32	0	100
White							
No school -----	8	38	24	30	0	0	100
1 to 2 grades -----	6	34	32	19	3	6	100
3 to 4 grades -----	17	41	22	18	0	2	100

Table 14. - Percentage distribution of farm youth aged 15 through 21 who were members of farm households with annual sales of specified amounts, by color and grade of school completed, selected regions, 1962 -- continued

Color and grade completed	Value of sales						Total
	0 to \$249	\$250 to \$1,499	\$1,500 to \$2,499	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 and over	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
EAST SOUTH CENTRAL REGION -- continued							
White							
5 to 7 grades -----	14	37	17	18	8	6	100
8 grades -----	11	30	18	18	16	7	100
9 to 11 grades -----	13	28	15	16	15	13	100
12 grades -----	12	27	25	15	12	9	100
13 to 15 grades -----	3	19	23	16	19	20	100
16 grades and over----	0	19	10	0	13	58	100
WEST SOUTH CENTRAL REGION							
Nonwhite							
No school -----	16	73	7	4	0	0	100
1 to 2 grades -----	56	44	0	0	0	0	100
3 to 4 grades -----	24	35	24	13	4	0	100
5 to 7 grades -----	24	45	1	8	20	2	100
8 grades -----	37	0	0	7	0	56	100
9 to 11 grades -----	0	49	33	11	0	7	100
12 grades -----	0	100	0	0	0	0	100
13 to 15 grades -----	0	0	0	0	0	0	0
16 grades and over----	0	0	0	0	0	0	0
White							
No school -----	12	24	31	16	17	0	100
1 to 2 grades -----	11	31	0	15	20	23	100
3 to 4 grades -----	18	35	23	11	2	11	100
5 to 7 grades -----	12	22	15	18	10	23	100
8 grades -----	15	35	14	11	9	16	100
9 to 11 grades -----	13	21	17	9	5	35	100
12 grades -----	12	18	9	14	10	37	100
13 to 15 grades -----	9	6	9	16	18	42	100
16 grades and over----	9	15	22	13	9	32	100

CHARACTERISTICS OF FARM FAMILIES WITH CHILDREN 15 TO 21 YEARS OF AGE, IN SURVEY STATES

Farm operators who operated small sized farms had relatively low gross sales. For example, 56 percent of the farm operators had gross value of sales of less than \$5,000 and 59 percent operated farms of less than 180 acres. About 40 percent of the farm operators with gross sales of less than \$2,500 operated farms of less than 100 acres. About three-fourths of the farm operators had gross sales of less than \$10,000 from farms of less than 260 acres (appendix, table 31).

Considerable variation occurred in both value of sales and size of farm among the seven regions. For example, half or more of the farms in four regions had sales of less than \$2,500. They were South Atlantic (51 percent), East South Central (65 percent), West South Central (53 percent), and Pacific (50 percent). In the South Atlantic Region, 83 percent of the farms had 170 acres or less, East South Central, 78 percent, West South Central, 56 percent, and Pacific, 81 percent (appendix, table 32).

Some of the variations among regions in both value of sales and size of farm can be accounted for by differences indicated between white and nonwhite farm operators in the South. ^{6/} In 1959, 49.2 percent of the nonwhite farm operators and 28.4 percent of the white farm operators had gross sales of \$5,000 or less (appendix, table 33).

In 1962, the distribution of white and nonwhite farm operators on the basis of gross value of farm products sold or size of farm did not differ much from that evident in 1959 (appendix, tables 34 and 35).

Age and Education

Farm operators who were between 45 and 54 years of age comprised 46 percent of all operators having children between the ages of 15 and 21. The next largest group was operators in the 35 to 44 age group. Together these two groups accounted for 75 percent of all farm operators (table 15).

About 31 percent of the operators who were 45 to 54 years old had completed eight grades of school, while 26 percent had completed less than eight. There were only 17 percent that had completed high school (table 16).

Younger farm operators, under 35 years old, had more formal education. For example, 51.7 percent of operators under 35 had completed between 9 and 12 grades of school, compared with 45.5 and 32.9 percent of operators 35 to 44 and 45 to 54, respectively (table 16). Almost 6 percent of the operators under 35 had four or more years of college, while 2 percent of those 35 to 44 years old and 4 percent 45 to 54 had that level of education.

^{6/} The South includes the South Atlantic, East South Central, and West South Central Regions.

Table 15. - Number of operators with children 15 through 21 years old in specified survey regions, by age and sex of operator, 1962

Age and sex	East North Central	West North Central	South Atlantic	East South Central	West South Central	Moun- tain	Pacific
	Number	Number	Number	Number	Number	Number	Number
Under 35 years:							
Male -----	---	843	1,653	931	1,352	521	116
Female -----	---	---	293	349	117	---	---
35 to 44 years:							
Male -----	54,370	51,048	36,723	38,216	35,527	9,174	2,020
Female -----	3,436	1,775	1,248	3,363	102	---	78
45 to 54 years:							
Male -----	84,557	86,184	56,412	66,182	56,496	14,105	2,406
Female -----	972	1,045	2,472	2,405	1,348	---	136
55 to 64 years:							
Male -----	33,171	43,705	26,509	25,900	24,749	9,838	777
Female -----	551	---	705	2,241	623	---	58
65 years and over:							
Male -----	6,335	6,869	7,322	8,533	4,619	64	214
Female -----	---	---	707	153	132	---	---
Unclassified:							
Male -----	10,732	11,612	5,689	1,496	5,599	131	311
Female -----	276	292	136	322	---	---	---
Total:							
Male -----	189,165	200,261	134,308	141,258	128,342	33,833	5,844
Female -----	5,235	3,112	5,561	8,833	2,322	---	272

Income and Education

Findings in a study by Miller (17) show that low educational attainment is closely associated with low income. Information obtained in the study reported here is consistent with other studies which show that low income farmers are, on the average, poorly educated. For example, farm operators with zero grades of schooling completed were absent from the \$10,000 and over gross sales group. On the other hand, farm operators with one or more years of college were not in the lowest gross sales group (table 17). Between three-fifths and two-thirds of the farm operators in the less than \$5,000 gross sales group had completed eight grades or less. About 40 percent of the farm operators in the \$15,000 and over gross sales group had this level of formal schooling. Approximately 16 percent of the farm operators in the \$25,000 and over group had completed one or more years

Table 16. - Percentage distribution of farm operators in specified age group, by highest grade of school completed, survey States, 1962

Grade completed	Age group		
	Under 35 years	35 to 44 years	45 to 54 years
	Percent	Percent	Percent
0 grades -----	0	0.7	0.9
1 to 2 grades -----	1.5	.6	1.5
3 to 4 grades -----	2.2	4.4	6.5
5 to 7 grades -----	18.8	14.2	16.7
8 grades -----	14.6	26.6	31.0
9 to 11 grades -----	27.9	20.2	16.1
12 grades -----	23.8	25.3	16.8
13 to 15 grades -----	5.4	5.4	4.7
16 grades and over -----	5.8	1.6	3.9
Unclassified -----	0	.9	1.7
Total -----	100.0	100.0	100.0

Table 17. - Percentage distribution of operators of farms with specified amounts of gross sales, by years of school completed, 30 States, 1962

Years of school completed	Less than \$250	\$250 to \$1,499	\$1,500 to \$2,499	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$14,999	\$15,000 to \$24,999	\$25,000 and over
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
No school----	1.0	1.5	2.8	1.0	1.0	0	0	0
1 to 4 years--:	12.5	11.8	10.4	8.7	3.5	2.3	1.4	.9
5 to 7 years--:	22.4	23.0	23.5	19.2	16.2	9.1	6.6	5.0
8 years -----	24.9	26.0	30.1	29.9	32.9	36.4	32.1	32.9
9 to 12 years--:	31.4	28.8	25.1	34.3	33.5	38.1	48.6	44.0
College:								
1 to 3 years -:	0	2.2	2.6	3.1	6.2	8.0	5.7	8.4
4 years and over -----	0	2.6	2.9	1.0	4.5	1.9	3.1	7.8
Unclassified--:	0	4.0	2.9	2.8	2.0	4.0	2.5	1.0
Total -----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

of college, while 8 percent of operators in the less than \$5,000 group had completed that amount of schooling.

Age and Income

Income in the United States appears to be more equally distributed than three decades ago. The relationship between the distribution of income and specific measures of differences in the mental and physical abilities of people is of interest. Age is used as a general indicator of physical ability of the individual. Educational attainment in relation to income was previously discussed.

Analysis of age of the farm operator in relation to gross sales revealed that younger operators (under 35 years old) generally had smaller gross sales than older operators.

The study reported here deals only with farm operators with children aged 15 through 21. Therefore, the most typical age group of these operators was 45 to 54. Regionally, the range for this group was from 41 percent of all farm operators in the Pacific Region to 47 percent in the East South Central Region. The range for farm operators 35 to 44 years old was from 26 percent in the West North Central to 35 percent in the Pacific Region. Together, these two groups comprised 69 to 76 percent of all operators. Thus, comparisons were not attempted between each age group included in this study.

Operators Willing to Incur Debt for Education

Often farm operators are unable to provide the necessary financial assistance for their children to undertake post high school education. Their net farm income, if they have any at all, may be too small to meet this added cost.

In 1962, an appreciable proportion of farm operators indicated a willingness to incur debt to finance an education. Between 1957 and 1962, approximately 13 percent of the operators in 30 selected States applied for such financial assistance. About 70 percent of the applications were accepted and 30 percent rejected (table 18).

The National Defense Education Act

Since 1959, the National Defense Education Act (31) has been a source of financial assistance for education. This legislation was designed to (1) establish a limited program of Federal scholarships, (2) establish loan programs for students at college or technical school level, (3) provide grants to States for strengthening science, mathematics, and modern foreign language instructions in public schools, (4) establish language institutes and area centers to expand and improve the teaching of languages, (5) assist in the expansion of graduate education, (6) assist in the improvement of guidance, counseling, and testing programs, (7) provide for research and experimentation in the use of television, radio, motion pictures, and related media for education, and (8) improve statistical services of State educational agencies. About \$224.5 million was spent for these purposes during the 1959-62 period (table 19).

Table 18. - Percentage of farm operators who received, failed to receive, or did not apply for educational loans, by value of gross sales, 30 survey States, 1962

Value of sales	Total operators surveyed	Percentage of operators who--		
		Received assistance	Applied but failed	Did not apply
	Percent	Percent	Percent	Percent
Under \$250-----	8.2	0.7	0.1	7.4
\$250 to \$1,499-----	20.3	1.4	.6	18.3
\$1,500 to \$2,499-----	12.3	1.3	.7	10.3
\$2,500 to \$4,999-----	15.2	1.7	.9	12.6
\$5,000 to \$9,999-----	17.9	2.0	1.0	14.9
\$10,000 to \$14,999---	11.3	0	.4	10.9
\$15,000 to \$24,999---	8.8	.9	.2	7.7
\$25,000 and over ----	5.8	.9	.1	4.8
Total -----	100.0	8.9	4.0	87.1
Number of operators -	754,670	67,070	30,399	657,201

Table 19. - Student loan funds available: Federal and institutional contributions under National Defense Education Act, fiscal years 1959-62

Fiscal year	Federal capital contribution	Institutional contribution	Total funds available
	Dollars	Dollars	Dollars
1959-----	30,495,923	3,388,436	33,884,359
1960-----	40,295,421	4,477,269	44,772,690
1961-----	57,451,289	6,383,476	63,834,765
1962-----	73,845,000	8,205,000	82,050,000
Total -----	202,087,633	22,454,181	224,541,814

Source: National Defense Student Loan Program (28).

Under this Act, the Federal contribution is approximately 90 percent of the total financial outlay. The institutional contribution is about 10 percent.

Among the seven regions included in this study, the total Federal contribution made for fiscal years 1959-62 was about 60 percent of the total outlay, or \$121 million (28). About 75 percent of the total population of the United States is in

these regions. About 66 percent of the regional population is classified by the census as urban and 34 percent as rural (table 20).

During the 1959-62 period, 1,469 colleges and universities participated in the National Defense Student Loan Program (28). An estimated 158,000 students received financial aid during the 4-year period.

SOURCES OF FINANCIAL ASSISTANCE FOR EDUCATION

Farm operators have received some financial assistance from several sources for educating their children. In 1962, loans from private banks provided 70 percent of the assistance, scholarships and gifts and aid from relatives, 23 percent, National Defense Education Act loans, 2 percent, and loans from colleges and schools, 5 percent (table 21).

Of the 755,000 farm operators included in the study, 67,000 received aid from these sources between 1957 and 1962 (table 19). Farm operators with low gross sales, less than \$1,500, applied for assistance to a lesser extent and failed to obtain assistance to a greater extent than did the more prosperous farm operators.

Failure by farm operators to obtain financial assistance for educational purposes was partly related to the size of farm operated by the prospective borrower. For example, although 72 percent of all operators had farms with less than 260 acres, 82 percent of the farm operators who failed to obtain financial assistance for their children's education were on less than 260-acre farms (table 22). Of the total operators in the study, 28 percent operated farms with 260 acres or more, and 18 percent of all applicants who were not accepted were on these larger farms.

PLANNERS AND EXPECTED ATTENDERS

Actual college attendance is closely associated with the high school graduate's college plans and high school curriculum (24, p. 7). Other factors affecting college attendance are the graduate's intelligence, scholastic standing, family income, and the occupation of the household head. 7/ Generally low, but positive, relation was found between college attendance and each of the following: Number of siblings, type of high school, urban-rural residence, sex, region of residence, and size of high school class. Color was not statistically significant in relation to college attendance of farm and nonfarm high school graduates in 1960. Forty-eight percent of the variance in college attendance was accounted for by the above 13 items. The remaining 52 percent of the variance in college attendance remained unexplained.

In 1962, farm operators who had senior high school graduates in the family were asked specific questions on the types of post high school training desired for their children. The types of post high school training were college, technical school, and

7/ A substantial proportion of the youth classified as farm residents were in households in which the head was employed primarily in a nonfarm job (24, p. 5).

Table 20. - Percentage distribution of Federal contribution under the National Defense Education Act among selected regions, and urban and rural population as percentage of U. S. total

Region	Federal contribution <u>1/</u>	Population as a percentage of U. S. total <u>2/</u>		
		Total	Urban	Rural
	Percent	Percent	Percent	Percent
East North Central---	28.7	26.9	19.6	7.3
West North Central --:	20.5	11.4	6.7	4.7
South Atlantic-----:	11.7	19.3	11.0	8.3
East South Central ---:	12.0	9.0	4.3	4.6
West South Central---	17.8	12.6	8.5	4.1
Mountain-----:	4.3	5.1	3.4	1.7
Pacific-----:	5.0	15.7	12.7	3.0
Total -----:	100.0	100.0	66.4	33.6

1/ Derived from National Defense Student Loan Program (28).

2/ Census of Population (22, vol. 1).

Table 21. - Senior high school farm youth who obtained financial assistance from specified sources for additional education, distributed by value of gross sales from the farm, 30 States, 1962

Value of sales	Source of loan				All sources
	Banks	Colleges or schools	National Defense Education Act	Other sources	
	Percent	Percent	Percent	Percent	Percent
Under \$250-----:	7.0	13.6	13.3	7.1	7.5
\$250 to \$1,499 -----:	14.1	34.9	24.2	14.3	15.4
\$1,500 to \$2,499 -----:	15.2	23.6	---	11.5	14.3
\$2,500 to \$4,999 -----:	22.3	8.4	---	15.9	19.6
\$5,000 to \$9,999 -----:	21.1	16.1	51.4	25.9	22.7
\$10,000 to \$14,999 -----:	---	---	11.1	---	---
\$15,000 to \$24,999 -----:	10.2	3.4	---	12.9	10.6
\$25,000 and over -----:	9.9	---	---	12.4	9.8
Unclassified-----:	.2	---	---	---	.1

Table 21. - Senior high school farm youth who obtained financial assistance from specified sources for additional education, distributed by value of gross sales from the farm, 30 States, 1962 -- continued

Value of sales	Source of loan				All sources
	Banks	Colleges or schools	National Defense Education Act	Other sources	
	Percent	Percent	Percent	Percent	Percent
Total-----	100.0	100.0	100.0	100.0	100.0
Seniors receiving loans: :					
Number -----	47,724	3,179	1,616	15,910	68,429
Percent -----	70.0	5.0	2.0	23.0	100.0

Table 22. - Farm operators who applied for loans from commercial banks for family members to continue schooling but were not accepted, by size of farm, 30 States, 1962

Size of farm	Operators			
	Male		Female	
	Number	Percent	Number	Percent
1 to 9 acres -----	584	1.9	0	---
10 to 49 acres -----	4,692	15.4	0	---
50 to 99 acres -----	5,585	18.4	0	---
100 to 179 acres -----	6,724	22.1	0	---
180 to 259 acres -----	7,442	24.5	29	100.0
260 to 499 acres -----	2,903	9.6	0	---
500 to 999 acres -----	1,686	5.6	0	---
1,000 acres and over--	753	2.5	0	---
Total -----	30,370	100.0	29	100.0

trade school. ^{8/} Graduates for whom none of these were indicated were not considered as expected participants in post high school training. There were 86,136 out of 148,033 high school graduates, or 58 percent, who made definite plans for post high school training. ^{9/} Of the 86,136, there were 41,933 males and 44,203 females (table 23).

In the section that follows, attention focuses on the demands of these students for higher education. Some proportion of those students for whom no plans were indicated, 42 percent, may continue their education beyond high school.

College, Technical, or Trade School

Of the white high school graduates in all States studied, 37 percent of the males and 43 percent of the females planned to attend college. About 6 percent of the males and 5 percent of the females planned to attend trade schools, and 4 percent of the males and 11 percent of the females were considering technical schools (table 23).

Comparable plans for nonwhite youth in three selected regions were as follows: college, 43 percent of the males and 50 percent of the females; trade school, 14 percent of the males and 7 percent of the females; and technical school, no males, but 6 percent of the females (table 24).

There was considerable variation among the seven regions in the proportions of male and female youth who expressed a preference for a particular type of schooling. In the East North Central, 27 percent of the white males preferred college, 2 percent trade school, and 1 percent technical school. Forty-five percent of the male youth in the South Atlantic indicated that they planned to attend college, 7 percent trade school, and 15 percent technical school. Among the white female farm youth in the East South Central Region, 48 percent were interested in attending college, 2 percent trade school, and 4 percent technical school (table 23). Within the South Atlantic and the East South Central Regions, differences in the proportions of farm youth, white and nonwhite, who indicated a particular type of schooling varied more than did such differences between the two regions.

In the East South Central Region, 43 percent of the nonwhite males and 47 percent of the females indicated a desire to attend college. Eight percent of the females planned to attend a trade school. A similar breakdown for the white youth showed that 37 percent of the males desired to attend college, 6 percent technical school, and 14 percent trade school. For the females, 48 percent had plans for college, 2 percent trade school, and 4 percent technical school (tables 23-24).

^{8/} Technical schools provide courses in advanced skills such as electronics, office administration, medical assistance, mechanical drawing, and computer machinery repair. Trade schools include courses in basic skills such as carpentry, plumbing, brick laying, and electrical wiring.

^{9/} This percentage is slightly larger than the 53 percent shown in (28). The difference probably can be accounted for by differences in the population covered and by sampling variability.

Table 23. - White farm youths who were high school graduates, distributed according to type of further training they wished to acquire, by region and sex, 30 States, 1962

Region	Type of schooling by sex						All types	
	College		Trade		Technical			
	Male	Female	Male	Female	Male	Female	Male	Female
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
East North								
Central----	27.0	50.6	2.3	0	0.9	16.5	30.2	67.1
West North								
Central----	40.6	38.7	5.7	7.3	4.5	9.2	50.8	55.2
South Atlantic-	45.0	45.6	6.8	4.9	15.0	10.2	66.8	60.7
East South								
Central----	36.7	48.2	13.9	1.8	5.9	3.8	56.5	53.8
West South								
Central----	56.2	38.8	9.4	13.7	3.2	16.2	68.8	68.7
Mountain ----	12.8	15.5	2.7	13.7	1.3	2.7	16.8	31.9
Pacific -----	21.6	31.2	9.8	0	5.9	9.4	37.3	40.6
Average ---	36.9	42.6	6.0	5.4	4.3	10.9	47.2	58.9

Table 24. - Nonwhite farm youth who were high school graduates, distributed according to type of further training desired, selected region and sex, 1962

Region	Type of schooling by sex						All types	
	College		Trade		Technical			
	Male	Female	Male	Female	Male	Female	Male	Female
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
South Atlantic-	42.3	48.7	29.6	7.3	0	10.3	71.9	66.3
East South								
Central----	43.3	47.5	0	7.9	0	0	43.3	55.4
West South								
Central----	41.8	63.4	9.2	0	0	0	51.0	63.4
Average ---	42.5	50.1	13.6	6.6	0	5.9	56.1	62.6

None of the nonwhite youth and only a small percentage of the white farm youth selected technical school training in the East South Central and West South Central Regions.

Educational Opportunity

Several factors account for the relative educational disadvantage of rural youth contrasted with urban youth. According to Rovetch (19), rural education has not kept pace with national growth and change over time. Small school districts, low population density, and relatively low incomes in rural areas have provided a quality of education which, by many available measures, is less adequate than that offered by urban schools.

Two additional measures of adequacy and equality in secondary education are school holding power and comparative percentages of high school graduates going on to college (19). On both these measures, the urban youth are better off. In 1940, the percentages of youth 14 to 17 years old attending school were 85 percent for urban youth, 80 percent for rural nonfarm, and 69 percent for rural farm. For 1950, the percentages enrolled were 87, 82, and 79, respectively; for 1960, these percentages were 88, 85, and 87 (22). With consolidation of schools, attendance of farm youth improved, and more of those in the lower income levels shifted out of agriculture (10).

Between 1950 and 1960, the number of rural farm youth aged 15 to 17 enrolled in school decreased from 1,886,000 to 1,197,000, while the number of urban youth of this age group increased during this period from 1,888,000 to 2,820,000 (22). The number of school districts decreased 52 percent between 1950 and 1960, and an additional 18 percent between 1960 and the beginning of the 1962-63 school year (27, 29).

In the last half century of change and general improvement in American education, advantages for rural youth have not kept pace with those for their urban counterparts. In matters such as teachers' salaries, proportion of teachers with 4 years of college, curricular and extra-curricular opportunities offered, the rural schools have been at a relative disadvantage.

An indicator of the quality and quantity of educational opportunity provided students enrolled in school is the average annual amount of funds expended per pupil (table 25). Of the seven regions included in this study, there was a wide range in the average annual public school expenditure per pupil. In general, the States having the lowest amount of such expenditures were in the Appalachian Region and in the South. This general geographic area has the major proportion of its counties classified as redevelopment areas resulting from low incomes and unemployment under the conditions provided for under the Area Redevelopment Act of 1961.

Another indicator of the quality of the educational opportunity is the salary level of the instructional staff (table 26). A similar relationship exists for the average salary of instructional staff by region as for the average annual public school expenditures per pupil.

Thus, the predominantly rural areas in the South are handicapped in training their youth to be competitive with youth in the region's urban areas or from other regions for available jobs in the Nation. This disadvantage makes underemployed farm operators or underemployed members of their families less able to compete

Table 25. - Average annual public school expenditure per pupil, by state and region, 1960

Region and State	Dollars	Region and State	Dollars
East North Central-----	400	East South Central-----	232
Ohio-----	365	Kentucky-----	233
Indiana-----	369	Tennessee-----	238
Illinois-----	438	Alabama-----	241
Michigan-----	415	Mississippi-----	206
Wisconsin-----	413		
		West South Central-----	325
West North Central-----	368	Arkansas-----	225
Minnesota-----	425	Louisiana-----	372
Missouri-----	344	Oklahoma-----	311
North Dakota-----	367	Texas-----	332
South Dakota-----	347		
Nebraska-----	337	Mountain-----	376
Kansas-----	348		
		Pacific-----	458
South Atlantic-----	282	Washington-----	420
Delaware-----	456	Oregon-----	448
Maryland-----	393	California-----	424
Virginia-----	274	Alaska-----	546
West Virginia-----	258	Hawaii-----	325
North Carolina-----	237		
South Carolina-----	220		
Georgia-----	253		
Florida-----	318		

Source: Statistical Abstract of the U. S. (25, p, 113).

successfully for new jobs with the urban underemployed and unemployed. Even if new jobs were created in the disadvantaged areas and distributed in the proportions as those held by the 66.8 million workers employed in 1960, many of the unemployed and underemployed in the low income agricultural areas would be unable to qualify.

Occupational Status

Patterns of occupational employment are generated by the educational and skill requirements of the economy. During the past two decades, the shift of employment to occupations requiring high levels of training and skill has contributed significantly to the increased productivity of the work force in both the agricultural and industrial sectors.

One effect of the increased productivity of persons employed in agriculture has been to reduce the manpower requirements needed to produce the agricultural commodities demanded by the Nation's economy. Reduced manpower requirements

Table 26. - Average salary of instructional staff in public elementary and secondary schools, by regions, 1958 and 1960

Region	Average salary	
	1958	1960
	<u>Dollars</u>	<u>Dollars</u>
United States -----	4,703	5,174
East North Central -----	4,986	5,454
West North Central -----	3,929	4,414
South Atlantic -----	4,116	4,448
East South Central -----	3,241	3,686
West South Central -----	4,354	4,604
Mountain -----	4,598	5,055
Pacific -----	5,741	6,318

Source: Statistical Abstract of the U. S. (25, p. 127).

in agriculture indicate a continuing decline in farming opportunities for rural farm youth. This suggests that education and guidance are needed to assist rural farm youth in adjusting to urban social and occupational patterns (14).

Educational attainments, in part, determine the occupational status of the individual and his level of income earned. 10/ This points up the need for vocational, technical, and educational training programs oriented to regional and national rather than to local markets. There is an appreciable difference between annual average income of persons with less than 8 years of schooling as compared with persons completing 4 years of high school. In 1958, the high school graduate earned more than twice the amount earned by those with less than 8 years of school--\$5,567 against \$2,551 (table 27). Also, a college education is worth approximately \$178,000 more in a lifetime than a high school education.

School Enrollment By Age, Sex, and Color

No appreciable differences in school enrollment are found among youth between the ages of 7 to 17; however, differences become evident starting with the 18- to 19-year age group (table 28). The latter age is crucial in the educational planning for most students, since it contains the transitional period from high school to post high school education, or from high school to some noneducational activity. The effects of the lack of income necessary to continue formal education, particularly the non-white males, frequently results in the students seeking employment.

10/ For a discussion of income and education, see: Income and Education: Does Education Pay Off? (17).

Table 27. - Lifetime and annual mean income or earnings of males 25 years old and over, by years of school completed, selected years 1946-58 ^{1/}

Years of school completed	Lifetime income			Annual average income		
	1946 ^{2/}	1949	1958	1946 ^{2/}	1949	1958
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
<u>Elementary</u>						
Less than 8 years ^{3/} ---	74,369	91,095	120,965	1,738	2,062	2,551
8 years -----	98,702	122,787	169,976	2,327	2,829	3,769
<u>High school</u>						
1 to 3 years -----	107,940	141,870	198,881	2,449	3,226	4,618
4 years -----	135,852	174,740	241,844	2,939	3,784	5,567
<u>College</u>						
1 to 3 years -----	161,699	201,938	305,395	3,654	4,423	6,966
4 years or more -----	201,731	286,833	419,871	4,527	6,179	9,206

^{1/} Figures for lifetime income or earnings are based on the application of appropriate life tables to the arithmetic mean income, by age, as obtained for a cross-section of the population in each year shown. Figures for annual average income for 1949 are based on Census of Population data and, for 1946 and 1958, on current population surveys.

^{2/} Total money earnings.

^{3/} Includes persons reporting no years of school completed.

Source: Statistical Abstract of the U. S. (25, p. 119).

Decreases in the proportions of nonwhite males 18 years of age and over enrolled in school result in appreciable differences in median years completed by white and nonwhite males. For 1960, these differences for some selected States were: Mississippi, 5.0; Florida, 4.6; Louisiana, 4.5; South Carolina, 4.4; Georgia, 4.2; and Alabama, 3.7 years (25, p. 118).

The level and nature of educational attainment greatly influences a worker's choice of occupation as well as his level of earnings. In many occupations relatively high levels of education are required. The median years of school completed for various occupational groups as of March 1962 follow: ^{11/}

^{11/} Manpower Report of the President and A Report on Manpower Requirements (30, p. 13).

<u>Occupational group</u>	<u>Median years of schooling</u>
Professional, technical, and kindred workers-----	16.2
Managers, officials, and proprietors, except farm-----	12.5
Clerical and kindred workers -----	12.5
Salesworkers-----	12.5
Craftsmen, foremen, and kindred workers -----	12.5
Operatives and kindred workers-----	10.1
Private household workers -----	8.7
Other service workers -----	10.8
Laborers, except farm and mine -----	8.9
Farmers and farm managers -----	8.8
Farm laborers and foremen -----	8.5

Farm laborers and foremen had the lowest median (8.5) years of formal schooling completed. Farmers and farm managers with 8.8 years of schooling had about the same average level of schooling as did private household workers and laborers (8.7 years). For the entire United States, nonwhite males had the lowest median (9.0) years of formal schooling completed in March 1962 (table 29). The rapidly expanding manpower demand in professional and other high-level occupations contrasted with the narrowing opportunities for the unskilled workers points to the economic necessity for our youth to increase their educational attainment for current and future employment.

Several studies indicate that the rate of return on investment in education is relatively high. For example, Schultz (21, p. 81) estimated a 17.3 percent rate of return. Becker (2) estimated a 14.3 percent rate of return to white urban males in 1939 for 4 years of high school education.

Table 28. - Percentage of population enrolled in school, by age, color, and sex, United States, 1960

Age	Total		Male		Female	
	White	Nonwhite	White	Nonwhite	White	Nonwhite
	Percent	Percent	Percent	Percent	Percent	Percent
5 and 6 years-----	82.0	73.3	82.3	71.8	81.6	74.9
7 to 13 years -----	99.6	99.1	99.6	99.0	99.6	99.2
14 to 17 years-----	90.8	86.8	91.7	88.5	89.8	85.2
18 and 19 years-----	38.9	34.6	49.5	36.9	29.7	32.2
20 to 24 years -----	13.9	7.5	21.5	9.4	7.6	5.9
25 to 29 years -----	5.2	2.9	8.9	3.9	1.8	2.1

Source: Statistical Abstract of the U. S. (25, p. 115).

Table 29. - Median years of school completed, civilian labor force 18 years old and over, by sex and color, United States, specified dates 1952-62

Date	U. S. median	Both sexes		White		Nonwhite	
		White	Nonwhite	Female	Male	Female	Male
October 1952 -----	10.9	11.4	7.6	12.1	10.8	8.1	7.2
March 1957-----	11.6	12.1	8.4	---	---	---	---
March 1959-----	12.0	12.1	8.7	12.2	11.9	9.4	8.3
March 1962-----	12.1	12.2	9.6	12.3	12.1	10.5	9.0

Source: Manpower Report of the President and A Report on Manpower Requirements (30, table B-11, p. 156).

The proportion of high school graduates in the U. S. work force rose from 27 to 32 percent, while the proportion who completed 5 to 8 years of school decreased from 30 to 22 percent during the decade 1952-62 (table 30). During this 10-year period, the proportion that had completed high school increased from 42.8 to 53.8 percent. The percentage of workers with less than 5 years of school dropped from 7.3 to 4.6 percent. This group represents 3.1 million workers who had less than the minimum schooling needed for "functional literacy."

A substantial part of the increase in output in agriculture and in the rest of the economy cannot be easily explained by the increased efficiency in the utilization of inputs of the conventional types. A partial explanation may be two major neglected inputs, namely, (a) improving the quality of the people as productive agents, and (b) raising the level of the productive arts.

In 1962, Edward F. Denison attempted to identify the principal sources of recent economic growth in the United States and measure their importance. ^{12/} He estimated that improved education during 1929-57 raised the average quality of labor by 29.6 percent, or at an annual rate of 0.93 percent.

IMPLICATIONS

The ultimate objective of economic growth is to raise living standards of people and to free them, as much as possible, from the constraints and fears imposed by economic need. Improvements of human resources are possible

^{12/} Denison, Edward F. The Sources of Economic Growth in the United States and the Alternatives Before Us. Committee for Economic Development, Supp. Paper 13, New York, 1962.

Table 30. - Percentage distribution of the U. S. civilian labor force 18 years old and over who had completed specified years of school, specified dates 1952 to 1962

Color and date	Elementary		High school		College		Years of school completed not reported
	Less than 5 years	5 to 8 years	1 to 3 years	4 years	1 to 3 years	4 years	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Total							
October 1952 ---:	7.3	30.2	18.5	26.6	8.3	7.9	1.3
March 1957-----:	6.1	26.8	19.1	29.1	8.5	9.0	1.4
March 1959-----:	5.2	24.8	19.5	30.3	9.2	9.5	1.6
March 1962-----:	4.6	22.4	19.3	32.1	10.7	11.0	NR
White							
October 1952 ---:	5.2	29.3	18.7	28.3	8.8	8.5	1.2
March 1957-----:	4.3	25.8	19.0	30.8	9.0	9.7	1.2
March 1959-----:	3.7	23.6	19.4	32.0	9.7	10.2	NR
Nonwhite							
October 1952 ---:	26.7	38.7	15.9	10.8	3.7	2.6	1.7
March 1957-----:	21.2	34.9	19.3	14.8	3.9	3.4	2.6
March 1959-----:	17.9	34.3	20.6	15.8	4.5	3.9	3.1
March 1962-----:	15.4	29.8	23.2	21.0	5.7	4.8	NR

Source: Manpower Report of the President and A Report on Manpower Requirement (30, p. 156, table B-11).

through (a) higher educational standards and attainments, (b) making available advanced technically oriented basic training and retraining programs, and (c) developing regional trade and technical schools so that rural youth may have easy access to such training. Such improvements in our basic educational system should permit rural youth to become more competitive in the national labor market.

The lower educational attainments of many farm people place them at a disadvantage compared with the urban population in securing comparable incomes. Important among the factors accounting for this disadvantage in education are (1) the heavy concentration of low incomes in rural areas, (2) limited capital, (3) low educational attainments, and (4) limited financial resources to provide adequate facilities and services for higher education, technical and vocational training of the farm population in certain regions of the United States. The impact of these limitations has resulted for many in relatively narrow horizons and outlook with respect to (a) goals that are attainable and within the scope of the individual's capacities, (b) limited knowledge of the educational and technical requirements for competitive status in the national job market, which may result in dropping out of school, and (c) inability to compete with urban youth for scholarships and grants-in-aid at the State and national levels.

Because of these conditions, there is need for programs to improve educational services for rural youth. Needed are vocational counseling and guidance which will broaden their horizons and make them fully aware of requirements of technical and vocational occupations and of the advantages of investing in education.

Analysis of the educational attainments of the adult population suggests that the differences favoring the urban population in 1950 had persisted and, occasionally, widened by 1960. In both 1950 and 1960, the adult rural-farm population contained the highest proportion of individuals who may be characterized as functional illiterates -- persons with fewer than 5 years of school completed.

The future may hold greater promise for rural youths. The proportion of rural farm youths of high school age enrolled in school increased substantially between 1950 and 1960, and reached the level characteristic of the urban population. This increased school enrollment of farm youth provides a necessary base for further broad educational training, including vocational and technical skills, provided sufficient financial resources and special facilitating services are made available to the economically disadvantaged rural farm group.

Youths who are unable to obtain higher educational training and technical skills owing to lack of financial resources may expect to experience future losses in economic well-being. The extent to which farm youths are unable to obtain higher education is reflected in the study reported here. In 1962, there were approximately 162,000 rural high school graduates in 30 survey States. Of the total high school graduates, 86,000, or 53 percent, indicated definite plans to undertake post high school training. Approximately 62,000, or 38 percent, were undecided or indefinite on plans for higher education, and 14,000, or 9 percent, did not plan to continue their education.

Studies on resource requirements for specified farm operator income indicate that gross farm sales amounting to \$10,000 generally are required to realize a net annual farm income of \$2,500 to \$3,500. Net farm income of less than \$2,500, unless supplemented by off-farm income or otherwise, is probably inadequate to provide financial assistance for a youth to attend college. A major reason for the low level of educational aspiration for farm youth is limited financial resources provided by farm operator income.

Without special attention focused on the broad need of rural farm youth, many cannot be expected to participate fully or competitively in the projected increased demands for workers possessing technical skills and higher educational training. Automation and changes in technology are replacing workers with limited skills and education, and increasing the demand for workers who meet these requirements. Higher education and technical training are the bedrocks upon which the skills of the work force are built. Also, education increases the flexibility and mobility of the work force and provides the necessary conditions for retraining when old skills are made obsolescent by new technology. Changes in technology and the state of the arts may require periodic training and retraining.

The Department of Labor forecasts increased employment for the 1960's and 1970's of professional, technical, and kindred workers, who have been the fastest growing occupational groups during the 1950's. The expected increase is more than

twice the average rate for all fields of work between 1960 and 1975. In contrast, the employment of farmers, including farm managers and foremen, and farm laborers will continue to decrease. Between 1960 and 1970, the decline may be more than 20 percent, with a further decrease of about 6 or 7 percent likely between 1970 and 1975 (30, p. 103). Over the 15-year period, the drop in employment may be as great as 1.5 million below the 1960 figure of about 5.5 million. 13/

Reservoirs of underemployed farm operators and farm youths are being created in some agricultural areas which are undergoing structural adjustments due to technological changes. Coupled with underemployment and unemployment in these areas are other tangible losses. For example, population is declining, which results in erosion of the economic base. The investment required for social overhead in upgrading of the county school system and community development is lacking. The flow of new investment into depressed areas ceases.

Thus, the employment outlook is relatively bright for the more highly educated and skilled working force that will be operating the mechanized plants of the future. But many rural farm youths may not participate fully in this future unless special programs of help, such as educational loans at low interest rates, are made available.

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APPENDIX

Table 31. - Number of farm operators by size of farm and gross value of sales, 30 survey States, 1962

Value of sales	Total opera- tors	Size of farm							
		1 to 9 acres	10 to 49 acres	50 to 99 acres	100 to 179 acres	180 to 259 acres	260 to 499 acres	500 to 999 acres	1,000 acres and over
		Number	Number	Number	Number	Number	Number	Number	Number
Under \$250	62,015	11,652	25,605	14,609	5,601	3,607	303	512	86
\$250 to \$1,499	153,364	17,232	50,550	45,799	21,609	10,956	5,252	1,772	194
\$1,500 to \$2,499	92,825	2,067	26,066	23,974	22,086	8,355	5,527	3,408	1,342
\$2,500 to \$4,999	114,738	3,909	14,270	26,428	32,343	14,273	16,388	6,147	2,980
\$5,000 to \$9,999	135,634	578	7,216	13,515	44,404	29,575	23,270	13,786	3,290
\$10,000 to \$14,999	85,587	145	1,597	6,203	13,960	18,039	25,861	9,861	9,921
\$15,000 to \$24,999	66,566	---	1,148	1,925	6,637	10,584	23,239	11,806	11,237
\$25,000 and over	43,941	257	519	1,164	2,443	5,004	13,804	11,154	9,596
Unclassified	1,153	---	---	398	---	---	178	---	376
Total	755,822	35,840	126,971	134,215	149,083	100,393	113,852	55,446	39,022

Table 32. - Number of farm operators in specified regions, by gross value of sales and by size of farm, 30 survey States, 1962

Value of sales and size of farm	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
	Number	Number	Number	Number	Number	Number	Number
<u>Value of sales</u>							
Under \$250	10,067	8,396	12,740	15,955	14,001	907	349
\$250 to \$1,499	33,611	19,649	26,067	43,080	26,270	3,290	1,397
\$1,500 to \$2,499	19,020	12,608	20,044	26,358	13,843	456	486
\$2,500 to \$4,999	28,812	31,514	18,379	22,098	12,483	966	486
\$5,000 to \$9,999	37,287	46,590	20,363	13,546	9,056	6,384	408
\$10,000 to \$14,999	24,277	34,473	7,880	3,982	6,536	6,069	370
\$15,000 to \$24,999	16,262	23,495	6,834	3,144	10,752	5,633	446
\$25,000 and over	9,414	17,663	3,045	2,833	8,557	1,925	504
Total	178,750	194,388	115,352	130,996	101,498	29,240	4,446
<u>Size of farm</u>							
1 to 9 acres	8,323	4,543	16,158	7,089	5,087	151	389
10 to 49 acres	20,601	10,189	39,901	36,132	16,708	1,517	1,923
50 to 99 acres	38,327	16,797	27,884	33,074	16,942	516	795
100 to 179 acres	42,583	42,837	18,149	25,687	18,310	1,011	506
180 to 259 acres	34,377	32,189	8,690	10,809	11,527	2,413	388
260 to 499 acres	28,243	48,515	6,413	12,077	13,087	5,188	329
500 to 999 acres	6,495	24,483	3,112	4,749	10,274	7,217	116
1,000 acres and over	256	15,256	1,065	1,669	9,964	11,127	---
Total	179,105	194,809	115,352	131,286	101,584	29,240	4,446

Table 33. - Distribution of farms by economic class in the South, by color of operator, 1959 ^{1/}

Item	Class	Number		Percent		Nonwhite as percentage of each class
		Nonwhite	White	Nonwhite	White	
						Percent
All farms -----		265,696	1,379,332	100.0	100.0	16.2
Commercial -----		154,298	757,470	58.2	55.0	16.9
\$40,000 or more -----	I	197	31,058	.1	2.3	.6
\$20,000 to \$39,999 -----	II	520	54,123	.2	3.9	1.0
\$10,000 to \$19,999 -----	III	2,663	108,396	1.0	7.9	2.4
\$5,000 to \$9,999 -----	IV	20,230	172,210	7.7	12.5	10.5
\$2,500 to \$4,999 -----	V	51,862	225,641	19.6	16.4	18.7
Less than \$2,500 -----	VI	78,826	165,942	29.6	12.0	32.2
Noncommercial -----		111,398	620,917	41.8	45.0	15.2
Part-time -----		67,160	433,492	25.2	31.4	13.4
Part-retirement -----		44,238	187,425	16.6	13.6	19.1

^{1/}South includes the following States: Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

Source: 1959 Census of Agriculture (26).

Table 34. - Number of white and nonwhite farm operators, in specified regions, by value of sales, 30 survey States, 1962 ^{1/}

Value of sales	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
	Number	Number	Number	Number	Number	Number	Number
White							
Under \$250 -----	10,067	8,073	9,739	12,691	11,753	507	349
\$250 to \$1,499 -----	33,611	19,649	18,777	33,170	21,972	3,290	1,358
\$1,500 to \$2,499 -----	19,020	12,608	14,514	21,276	13,036	466	486
\$2,500 to \$4,999 -----	28,812	31,514	13,233	17,576	11,844	950	486
\$5,000 to \$9,999 -----	37,287	46,590	17,497	12,312	8,344	8,384	369
\$10,000 to \$14,999 -----	24,277	34,473	6,864	3,874	5,967	8,069	370
\$15,000 to \$24,999 -----	16,262	23,495	6,514	3,144	10,752	5,633	407
\$25,000 and over -----	9,414	17,663	3,045	2,833	8,477	1,925	504
Total -----	178,750	194,065	90,183	106,876	92,145	29,224	4,329

Table 34. - Number of white and nonwhite farm operators, in specified regions, by value of sales,
30 survey States, 1962 1/-- continued

Value of sales	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
	Number	Number	Number	Number	Number	Number	Number
Nonwhite							
Under \$250	---	323	3,001	3,264	2,248	---	---
\$250 to \$1,499	---	---	7,250	9,910	4,298	---	39
\$1,500 to \$2,499	---	---	5,530	5,082	807	---	---
\$2,500 to \$4,999	---	---	5,146	4,522	639	16	---
\$5,000 to \$9,999	---	---	2,866	1,234	712	---	39
\$10,000 to \$14,999	---	---	1,016	108	569	---	---
\$15,000 to \$24,999	---	---	320	---	---	---	39
\$25,000 and over	---	---	---	---	80	---	---
Total	---	323	25,169	24,120	9,353	16	117

1/ 1,152 unclassified farms were not included in the regional totals.

Table 35. - Number of farms in selected regions, by size of farm, white and nonwhite operators,
30 survey States, 1962 1/

Acres	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
	Number	Number	Number	Number	Number	Number	Number
White							
1 to 9	8,323	4,543	6,500	5,656	4,279	291	380
10 to 49	20,601	9,866	26,682	23,226	12,249	1,517	1,806
50 to 99	38,227	16,797	23,110	28,207	15,659	500	795
100 to 179	42,583	42,837	16,016	23,029	16,398	1,011	506
180 to 259	34,377	32,189	8,040	9,654	10,973	2,413	388
260 to 499	28,243	48,515	5,852	11,532	12,828	5,188	329
500 to 999	6,495	24,483	3,112	4,372	10,196	7,217	116
1,000 and over	256	15,256	871	1,490	9,649	11,127	---
Total	179,105	194,486	90,183	107,166	92,231	29,224	4,329
Nonwhite							
1 to 9	---	---	3,658	1,433	808	---	---
10 to 49	---	323	13,219	12,906	4,459	---	117
50 to 99	---	---	4,754	4,867	1,283	116	---
100 to 179	---	---	2,133	2,658	1,912	---	---
180 to 259	---	---	650	1,155	554	---	---
260 to 499	---	---	581	545	259	---	---
500 to 999	---	---	---	377	78	---	---
1,000 and over	---	---	194	179	---	---	---
Total	---	323	25,169	24,120	9,353	116	117

1/ 1,152 unclassified farms were not included in the regional totals.